

PROJECT NUMBER : 6505
PROJECT TITLE : Special Investigations
PROJECT LEADER : D. F. Ingraham
WRITTEN BY : R. W. Kanipe
PERIOD COVERED : December, 1990

R&D AND OPERATIONS SUPPORT

A. **Objective:** To provide analytical support to R&D and Operations personnel and projects.

B. **Results:**

An HPLC method was developed for the determination of propyl paraben in cigarette paper. The method was subsequently used to quantify propyl paraben in three paper samples for S. Baldwin.

Fourteen samples of Marlboro and Winston from the marketplace were analyzed for methoprene by HPLC. The results showed that Winston contained ~0.8 ppm methoprene and Marlboro contained ~0.4 ppm methoprene (in the samples analyzed).

An HPLC method was developed for the determination of nicotine in stack scrubber samples; twenty-eight samples were subsequently analyzed using this method. The limit of detection for this procedure was approximately 1 ppm.

Three capillary electrophoresis (CE) instruments were evaluated for purchase recommendations. This technique may be applicable for quantitation of flavors, tobacco constituents, smoke components, etc. that are not readily determined by GC or HPLC. While the theory of CE has been understood for the last decade, instrument development is still in its infancy. As a result, recommendations for purchase are pending new instrument introductions at the 1991 Pittsburgh Conference.

Acetic and butyric acids were determined in samples of Spanish Asta and Siva sheet material by capillary gas chromatography. These acids are being used to monitor spoilage.